called *Glatteis* in German and *verglas* in French; but it appears to be unfamiliar to the America npublic, including Canada. (See Nos. 10 and 24.) Furthermore, to the American the word "frost"—either alone or in composition—is more closely associated with the phenomenon of hoarfrost or sublimated water vapor than it is with ice or with temperatures below the freezing point of water. The Weather Bureau therefore rejects this name for the ice coating resulting from an ice storm and proposes to adopt the name "glaze" for the ice coating which forms when cold rain comes in contact with strongly chilled terrestrial objects.

This use of "glaze" has already been recognized as occurring in the United States; it is, in fact, the fourth meaning under that word as given in Murray's New English Dictionary, and we there find the following illustration:

(32) 1796. *Morse*, American Geography, v. 1, p. 215: Whenever the winter * * * sets in with rain, so as to cover the branches and leaves of trees with a glaze of ice.

The term "glaze" is accordingly adopted as the official Weather Bureau equivalent of the English term "glazed frost," the French "verglas," and the German "Glatteis."[6] The Bureau would not exclude from the pages of its publications, however, these other equivalent expressions when used by other than Weather Bureau writers.

RIME (RAUHFROST, DUFT, GIVRE).

In the course of the above discussion regarding American terminology, resulting in the adoption of "glaze," an old American name, for the English "glazed frost" (Glatteis, verglas), the Weather Bureau has also had to consider the phenomenon called "rime" (Rauhreif, givre). It is here desired to call the attention of the American student to the following statement taken from the Observer's Handbook published by the Meteorological Office, London:[7]

Rime. V. The international symbol V is intended to represent the phenomenon denoted by the German words *Rauhreif*, *Rauhfrost*, *Anreim*, *Duft*, and the French *givre*. Silver Thaw has been used as the English equivalent of these terms by some writers; others, however, use this expression to translate the German "Glatteis," French "verglas." It is here proposed to use the word rime to translate the German "Duft," French "givre."

Rime, as thus defined, is an accumulation of frozen moisture on trees, etc., which presents a silvery white and **rough** surface, bearing some resemblance to hoarfrost; it is, however, **only formed during fog,** whereas hoarfrost is a result of nocturnal radiation from the earth to a clear sky.

In our [i. e., England's] climate rime is of comparatively rare occurrence, for the white deposit on grass, etc., observed on foggy mornings consists in most cases of hoarfrost which had formed before fog developed. On Ben Nevis the depositions, however, were frequently so thick that they greatly interfered with the work of observing by clogging up the louvers of the thermometer shelter, etc. The phenomenon was noted in the record under the name "fog crystals."

The particles in a fog, even at temperatures far below the freezing point, consist of droplets of undercooled water, and when these come in contact with bodies they solidify immediately and form rime. Hoarfrost and rime may be distinguished, to a certain extent, by the fact that the former is not readily formed on good conductors of heat in thermal contact with relatively warm bodies on which they can draw for a supply of heat to replace that lost by radiation, whereas rime is deposited on all with equal facility.

The Weather Bureau at present feels that no addition is necessary to this statement, and wishes to record its official adoption of *rime*, as defined above, into the Weather Bureau vocabulary.

The phenomenon of rime is not uncommon in the United States, although rare at lower altitudes in our temperate districts. For example, at the Weather Bureau station on the Blue Ridge near Bluemont, Va., Mount Weather standing at an altitude of about 1,725 feet above M. S. L., rime was observed and photographed several times during the period 1903–1913. Pennants of "fog crystals," as we used to call the rime, would form to a length of many inches during driving cloud (fog) in cold weather (March). A very modest example of this Mount Weather rime is published in Fassig's "Climate and Weather of Baltimore" (Maryland Weather Service, v. 2), as Plate XXI, and its formation described on page 413 of that work. Plate XXII of the same work also illustrates the development of *glaze* (Glatteis) at the same locality. The rime is there called "frost figures." The frost-like deposit reported from Buffalo, N. Y., by Mr. Cuthbertson in the MONTHLY WEATHER REVIEW, March, 1902, **30**:125–6, seems to have been a most interesting case of the formation of rime in quiet, fog-filled air (it was there called "hoarfrost," the name by which it was then known in the Weather Bureau).

551.578.(45)

TWO ABNORMAL PRESSURE DISTRIBUTIONS IN ITALY.

Prof. Filippo Eredia, of the Ufficio Centrale di Meteorologia e di Geodinamica at Rome, submits the two isobaric charts presented in figures 1 and 3, with the statement that they are of interest not only because of the regularity in the pressure distribution but also because they represent, respectively, the highest and the lowest barometric pressures over Italy as shown by the Italian daily weather maps (Bollettino dell' Ufficio Centrale). The accompanying weather and sea conditions are presented in figures 2 and 4, which also repeat the isobars for 5-millimeter intervals.

Prof. Eredia writes that every day before drawing the isobars on the daily charts he subjects the individual reports to a minute examination and to comparisons between neighboring stations, giving particular attention to the barometric observations. In this scrutiny he finds his direct knowledge of the various stations, as well as the employment of special reports, of great value in determining the reliability of the individual daily reports; furthermore, he carefully checks the latter against the 24-hour changes at neighboring stations. It thus occurs that the barometric observations, as published for some cities in the Bollettino, do not always agree with the positions of the more carefully adjusted isobars of the corresponding map. Thus the pressures reported by Nice (Nizza) are often out of accord with the values at neighboring stations. In such cases the Nice pressure is rejected, as was done in drawing the isobars for January 24, 1907 (fig. 1).

The localities forming the Italian reporting réseau for the daily map, and therefore used for forecasting, are all at medium altitudes, so that the sea-level reductions of the barometers are perfectly comparable among themselves. For some years the Italian service has been making use of daily pilot-balloon observations at various stations. It is hoped to present an account of this pilot-balloon service in a later issue.—C. A. jr.

[6] *See* the English edition of the Codex, cited in footnote 5. *Also* Internationaler Meteorologischer Kodex * * * bearbeitet von G. Hellmann & H. H. Hildebrandsson. Deutsche Originalausgabe, 2te vermehrte Aufl., Berlin, 1911. (Veröffentl. d. k. preuss. meteorol. Instituts. Nr. 242.) p. 19.

[7] *Great Britain. Meteorological Office.* The Observer's Handbook. * * * Annual edition, 1913. London, 1913. (M. O. 191. For official use.) p. 55.

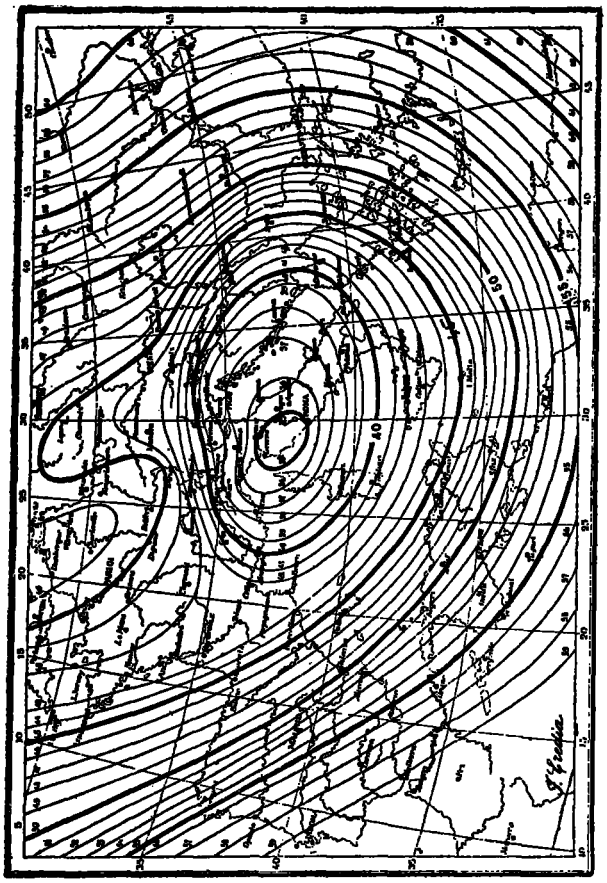

FIG. 3.—Extraordinary cyclone over the Tyrrhenian Sea, Jan. 23, 1915. (Isobars for whole centimeters.)

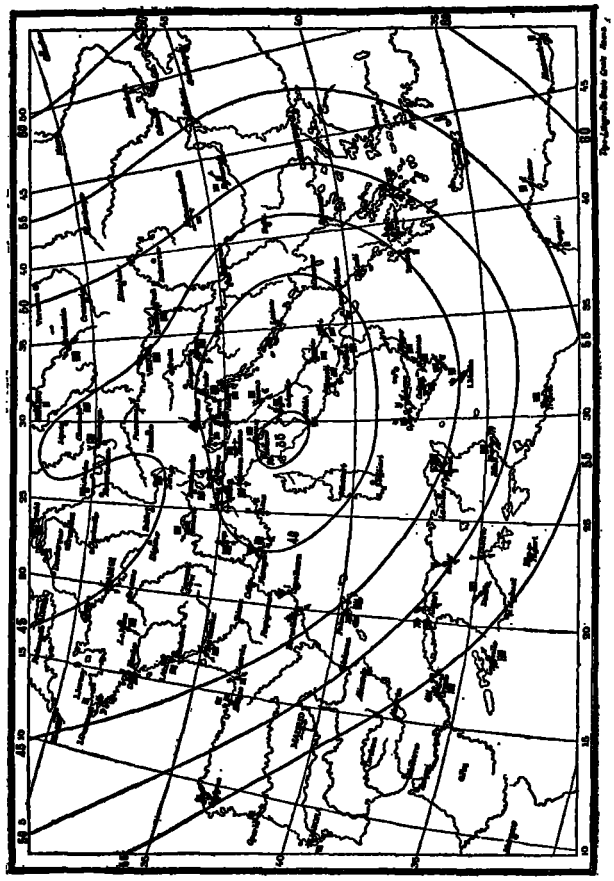

FIG. 4.—State of sky, wind direction and velocity, and the state of the sea, accompanying the cyclone of Jan. 23, 1915. (Isobars for each 5 centimeters.) (For meaning of symbols see p. 273.)

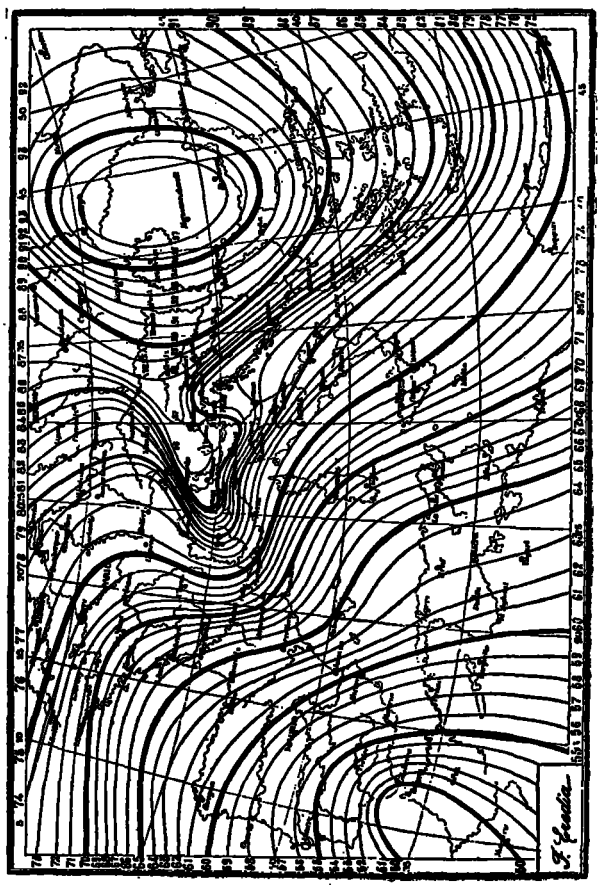

FIG. 1.—Extraordinary anticyclone of Jan. 24, 1907, over southeastern Europe. (Isobars for whole centimeters.)

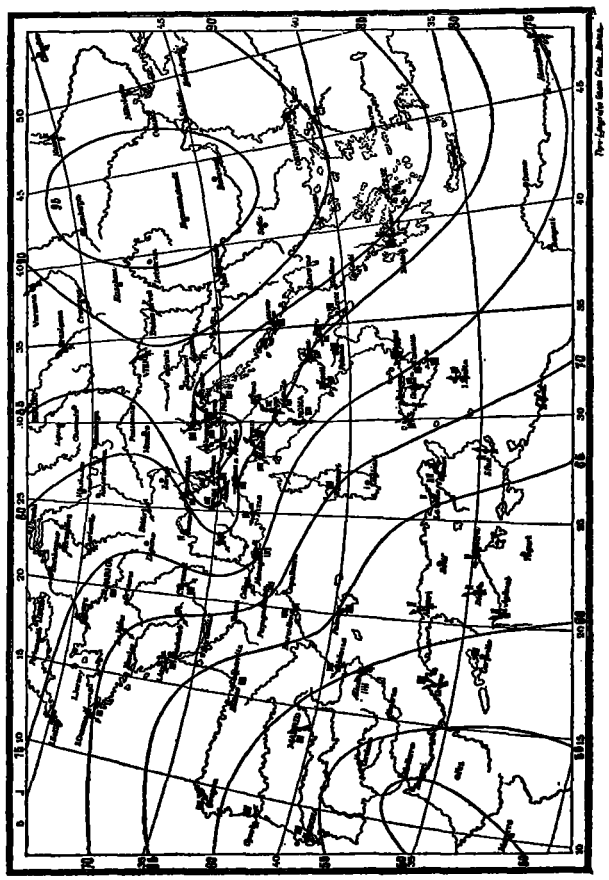

FIG. 2.—State of sky, wind direction and velocity, and state of the sea, accompanying the anticyclone of Jan. 24, 1907. (Isobars for each 5 centimeters.) (For meaning of symbols see p. 273.)